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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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MARGER JOHNSON & MCCOLLOM PC  
1030 SW MORRISON STREET  
PORTLAND OR 97205

EXAMINER

MARCANTONI, P

ART UNIT

PAPER NUMBER

1755

DATE MAILED:

08/10/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 7/14/00 Amendment & Response
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 28-71 is/are pending in the application.  
Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) 1-27 is/are allowed.
- ☒ Claim(s) 28-71 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 1755

**Improper Presentation of Product Claims in Re-Issue Application**

Claims 28-31 remain rejected under 35 U.S.C. 251 as being an improper recapture of claimed subject matter deliberately canceled in the application for the patent upon which the present reissue is based and a reissue applicant's failure to file a divisional application is not considered to be an error causing a patent granted on elected claims to be partially inoperative by reason of claiming less than the applicant had a right to claim. Thus, such error is not correctable by re-issue of the original patent under 35 USC 251. In re Watkinson, 900 F2d 230, 14 USPQ2d 1407 (Fed Cir. 1990); In re Orita, 550 F2d 1277, 1280, 193 USPQ 145, 148 (CCPA 1977). See also In re Mead, 581 F2d 251, 198 USPQ 412 (CCPA 1978). See MPEP 1450-51.

**Surrender of US Patent**

Applicants' surrender of original US patent number 5,922,299 is acknowledged.

**Rejection under 35 USC 112 2nd Paragraph:**

In claims 32 and 58 (a), the terms "surfactant concentration is *much less* than the critical micelle concentration" are relative and indefinite terms. How much is considered "much less" and what is the critical micelle concentration?

**New Rejection under 35 USC 112, First Paragraph (Commensurate in Scope/Enablement):**

The applicants specification is objected to and claims 32-71 are rejected under the first paragraph of 35 USC 112 as their process of making the mesoporous films would appear limited to silica (does not include all metal oxides), aqueous solvents (no support for organic solvents),

Art Unit: 1755

and acid catalyst (no support for base catalyst) as the applicants' specification would appear to be enabling only for silica, aqueous solvents, cationic surfactants, acid catalysts, specific heating temperatures, other ranges, etc.. Thus, applicants' new claims are not commensurate in scope with their enabling disclosure. Note that the same can be said for all new matter rejections noted below because applicants' specification is not commensurate in scope with their enabling disclosure. Applicants only have support for the enabling features specifically recited in their original disclosure.

#### **New Matter**

Claims 32-71 are rejected under 35 USC 251 and 35 USC 112 first paragraph on the grounds that the specification as originally filed would not appear to provide support for the invention as is now claimed.

The applicants have indicated in their response that no new matter is added and all new claims are supported by their originally filed specification including drawings and originally filed claims. It would appear the applicants are adding the new claims in their re-issue application that closely parallel or resemble those of *US Patent Number 5,858,457* to *Brinker et al.* possibly for the purposes of provoking an interference. However, after further consideration of the specific location from the specification where applicants derive their support, it is not seen that applicants have support for all of their new claims. Thus, the new matter over applicants' re-issue claims stands over the below mentioned claims.

Art Unit: 1755

With respect to claims 32 and 64, applicants newly added claim is quite similar in scope to Brinker et al.'s claim 1. Yet, applicants' explanations regarding critical micelle limitations as well as the limitations for the XRD peaks (where is the support for XRD data?), as well as some of the initial starting components of soluble source of metal oxide (what is this), water, organic solvent, surfactant, acid and base catalyst, etc. is not convincing. There is no support for an organic solvent (only an aqueous solvent), there is only support for an acid catalyst (col.6, line 59- no support for a base catalyst). Also, there is no support for surfactant concentration being "much less than the critical micelle concentration" in the specification. Further, there would appear no support that the surfactant is a free surfactant. These would appear almost an exact replication of the Brinker et al. patent and the examiner fails to see where applicants derive their support with the specific limitations of their claim 32.

The applicants' claims 33 and 65 are also new matter. The applicants would appear to have support from the *Background of the Invention* from their surrendered patent (US 5,922,299) yet have no support for optical coatings. The examiner is not convinced that because refractive index was measured that this is necessarily indicative of an optical coating. This measurement can also be used for other purposes other than only optical coatings. It is the examiner's position that applicants do not have support for *optical coatings* and this is new matter.

The applicants' claim 34 and 66 are also new matter. The applicants indicate that they have support for adding aluminum (metal) in silica (silicon dioxide) films in their Example 5 and support for silica films. The examiner agrees on this point. However, applicants do not have

Art Unit: 1755

support for aluminum oxide and combinations thereof. Example 5 merely states aluminum metal is added and not aluminum oxide nor is there indication that combinations of the oxides of both silicon and aluminum are part of the invention. Therefore, claim 34 is new matter.

Claim 35 would not appear to be new matter and supported by applicants' disclosure.

Claim 36 and 68 are new matter because applicants do not have support for the broad range of "aging" from --0 to approximately 4 hours prior to film deposition---. Where is the support for this range? Applicants only appear to have support for 1 hour of aging only. (See col.18, line 55). Therefore, because applicants claim the broad range as they do it is certainly new matter. Note that this would appear to resemble Brinker et al.'s claim 5 yet it is quite clear that from where applicants derive the basis for their support it is not present.

Applicants would appear to have support for a cationic surfactant in claim 37.

Claims 38 and 70 are new matter. Applicants have support for a temperature of 450C yet this does not give them support for approximately 400C. It would appear that applicants may have support for "approximately 450C" but it is not seen how applicants believe that 450C is approximately 400C. Thus, it would appear claim 38 is new matter which also closely resembles Brinker et al.'s claim 9.

Applicants have support for spin coating in claim 39.

Claim 40 would appear to be new matter since applicants now delete a critical step to their method. Namely, that critical step is spin coating which is actually performed in Examples 1 and

Art Unit: 1755

10 and would appear required in the process. It would appear that there is no support for a step of not actually using a step of spin coating and only rapid evaporation.

Claims 41-51 would appear to have support from applicants' original disclosure.

It was determined that the claims 52-54 above would not appear supported by the original disclosure and still are new matter. The numeric values in claims 52-54 are not supported by the original disclosure. Also, claim 53 is new matter since refractive index values down to about 1.16 as defined in applicants' original disclosure does not give applicants support for values even less than 1.16. This is new matter.

Claims 55 and 63 are new matter because applicants do not have support for a low k dielectric constant of less than approximately 2.5. The applicants have stated that since they have support for a refractive index of 1.16 that this would indicate a high film porosity corresponding to a low-k dielectric constant, e.g. of less than 2.5. The examiner holds this to be new matter because the applicants do not have literal support for "less than approximately 2.5". Also, the applicants have not presented a textbook or data, evidence or declaration showing how this equivalence was achieved. In addition, even if equivalent, it is unclear how a single value recited in column 10 gives support for a range of data points or values for dielectric constant. It would appear that applicants may have support for a dielectric constant of 2.5 alone but not all values below 2.5.

Also, with respect to claim 55. The applicants directions to enter in claim 55, second line thereof the terms ---having a dielectric constant of less than approximately 2.5---was also not

Art Unit: 1755

entered because it is an improper amendment under 37 CFR 1.121(c), Manner of Making Amendments, because applicants added more than 5 words in this claim. Re-writing the entire claim using brackets or underlining should resolve this issue.

Claims 56-57 are new matter. Applicants have no support for “any” type of surfactant as they are now claiming in step (a). Applicants have only support for cationic surfactant and the list in column 7, lines 41-52 and the examples only would appear to refer to cationic surfactants and does not include thus non-ionic surfactants and anionic surfactants. There is no support in the disclosure that any surfactant other than a cationic surfactant may be used in the invention.

There is no support in claim 58 for surfactant concentration being “much less than the critical micelle concentration” in the specification. Further, there would appear no support that the surfactant is a free surfactant. There is no support for a base catalyst either and this is also new matter. There is support only for an acid catalyst (see col.6, line 59). There is no support for organic solvent but only an aqueous solvent for the applicants’ invention and this is also new matter.

Claim 59 is also new matter since there is no support for an organic solvent but only support for an aqueous solvent.

Claim 60 would appear to be supported by the original disclosure.

Claims 61-62 is new matter because applicants claim an organic solvent which is new matter not supported by their original disclosure. There would appear to be no support for superstoichiometric amount for the amount of aqueous solvent.



Art Unit: 1755

Any claims not mentioned above would appear to be supported by the disclosure.

**RESPONSE:**

The applicants maintain that their submission of product claims to their re-issue application is proper and have cited further case law in support of their position. This is acknowledged. However, the examiner respectfully disagrees and maintains that *Orita* provides the basis for the position set forth by the PTO that is proper. The claiming of subject matter in the re-issue application which was canceled in response to a restriction requirement during prosecution of the original patent is an example of an error which may not be corrected by re-issue. *In re Orita*, 193 USPQ 145.

Further, re-issue may not be utilized to reclaim subject matter which was non-elected in the original application. 35 USC 251 cannot be used to circumvent other statutory requirements including the co-pendency requirement of 35 USC 120 for filing divisional applications on non-elected subject matter. This also applies to broadened variations of nonelected subject matter (See MPEP 1402 and MPEP 1450). a reissue applicant's failure to file a divisional application is not considered to be an error causing a patent granted on elected claims to be partially inoperative by reason of claiming less than the applicant had a right to claim. Thus, such error is not correctable by re-issue of the original patent under 35 USC 251. *In re Watkinson*, 900 F2d 230, 14 USPQ2d

Art Unit: 1755

1407 (Fed Cir. 1990); *In re Orita*, 550 F2d 1277, 1280, 193 USPQ 145, 148 (CCPA 1977). See also *In re Mead*, 581 F2d 251, 198 USPQ 412 (CCPA 1978). See MPEP 1450-1451.

The applicants argue that the term “surfactant concentration much less than the critical micelle concentration” is not indefinite. The examiner has reconsidered yet still disagrees. It is still vague and indefinite to say “much less”. It is a relative term on its face. Applicants may consider amending to ---surfactant concentration that exceeds a critical micelle concentration--- and this would be acceptable claim language as long as it does not represent new matter. This specific amendment would be entered by the examiner after final rejection since it resolves 35 USC 112 issues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is (703) 308-1196.

If efforts to reach the examiner are unsuccessful, supervisory primary examiner Mark Bell may be reached at (703) 308-3823. The fax phone number for Group 1700 is (703) 305-5408.



PAUL MARCANTONI  
PRIMARY EXAMINER  
GROUP 1100